Division of Chemistry and Chemical Technology
National Academy of Sciences-National Research Council

SEVENTH QUARTERLY STATUS REPORT

July 1 - September 30, 1965

N 66 80030

FACILITY FORM 602

(ACCESSION NUMBER)	(THRU)
1 (PAGES)	(CODE)
CR 67936 (NASA CR OR TMX OR AD NUMBER)	(CATEGORY)

to

Grants and Research Contracts
Code SC
Office of Space Sciences
National Aeronautics and Space Administration
Washington, D. C. 20546

Contract NASr-182

2101 Constitution Avenue
Washington, D. C. 20418

Progress of work performed for the National Aeronautics and Space Administration in furtherance of the Hyperthermal Environment Glossary Project provided for in Contract NASr-182 is summarized as follows:

1. The objectives and prescribed procedures for this project are as described in the First Quarterly Status Report. Developments during this reporting period included:

a. Preparation and distribution of ballots presenting alternative definitions for twenty-seven (27) terms. A total of eighty-eight (88) ballots have now been issued to members of the Critical Review Panel.

b. Completed ballots were reviewed and the results analyzed to determine the definitions for inclusion in the final glossary to result from this work. This glossary will be completed and submitted prior to December 31, 1965.

c. Liaison was continued with ASTM Committee E-21 through Mr. Frank Koubek, Chairman of Section III (Ablation). At his request, and with the approval of Mr. B. G. Achhammer of NASA Headquarters, a selected group of terms and associated definitions resolved in this project was prepared and will be submitted for consideration at the Committee's next meeting on November 1, 1965 at Seattle, Washington.

Services were also provided in one case each of requests for technical consultation and document loan. The attached copies of letters to the Safety Officer at the NASA Langley Research Center and the Librarian at the Goddard Space Flight Center indicate the services provided.

Robert G. Lyle

Robert G. Lyle, Research Assistant
NASA Project
Division of Chemistry & Chemical Technology

Attachments-2

4. Selection of Optimum Materials for Use in Liquid-Hydrogen-Fueled Aerospace Vehicles, Technical Documentary Report No. ASD-TDR-63-798, October 1963, by General Dynamics Astronautics, San Diego, California, J. L. Christian and J. R. Kerr, authors.

5. Compatibility of Metals and Cryogenic Liquids. Jack L. Christian, James E. Chafey, Abraham Hurlich, James F. Watson and William E. Witzell. Metal Progr. 83:100-103,122,124 (April 1963).

6. Fuel Tanks for Spacecraft: The Difficulties. Jack B. Esgar (U.S. National Aeronautics & Space Administration. Lewis Research Center, Cleveland, Ohio. Mech. Eng. 85:44-47(April 1963).

7. Impact Sensitivity of Metals (Titanium) Exposed to Liquid Nitrogen Tetroxide. U. S. Wright Air Development Division (Allied Chemical Corp., New York, N. Y.--H. F. Scott, Jr., C. W. Alley, H. T. Gerry and A. W. Hayford). WADD Technical Report 61-175; ... ASTIA Doc. 265619 (May 1961) 27 p.

8. Summary of Present Information on Impact Sensitivity of Titanium When Exposed to Various Oxidizers. Battelle Memorial Institute, Columbus, Ohio, Defense Metals Information Center (W. K. Boyd). DMIC Memorandum 89; PB 161239 (March 1961) 7 p.

Do not hesitate to call on me if I can be of further assistance.

Very truly yours,

ROBERT G. LYLE

RGL:gm

COPY

NATIONAL ACADEMY OF SCIENCES
NATIONAL RESEARCH COUNCIL
2101 CONSTITUTION AVENUE, WASHINGTON 25, D. C.

20418

September 23, 1965

Mr. John M. Weaver, Librarian
National Aeronautics & Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

Dear Mr. Weaver:

In accordance with your loan requests of September 13 and 17, we are sending you the following publications:

PDL - 46441
PDL - 46781
PDL - 47307
PDL - 47677
PDL - 48003
PDL - 48403

We consider this a 30-day loan and will appreciate it if, at the end of 30 days, these documents are returned to our library.

Very truly yours,

Walter M. Bejuki, Staff Director
Deterioration Project
Division of Chemistry & Chemical Technology

Enclosures - 6

lcc: Mr. Lyle - ACS
Library Loans Outstanding